

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

R. E. CAHOON ET AL.

CASE NO.: BB1201 US DIV

APPLICATION NO.: UNKNOWN

GROUP ART UNIT: UNKNOWN

FILED: HERewith

EXAMINER: UNKNOWN

FOR: VITAMIN B METABOLISM PROTEINS

PRELIMINARY AMENDMENTCommissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Prior to examination on the merits, please amend the application as follows and consider the following remarks.

**IN THE SPECIFICATION:****Please replace the following paragraphs:****Paragraph beginning at page 1, line 3:**

This application is a divisional of U.S. Application No. 09/371,056 filed August 9, 1999, whose contents are incorporated by reference, and claims the benefit of U.S. Provisional Application No. 60/096,342, filed August 12, 1998.

**Paragraph beginning at page 7, line 4:**

"Codon degeneracy" refers to divergence in the genetic code permitting variation of the nucleotide sequence without affecting the amino acid sequence of an encoded polypeptide. Accordingly, the instant invention relates to any nucleic acid fragment comprising a nucleotide sequence that encodes all or a substantial portion of the amino acid sequences set forth herein. The skilled artisan is well aware of the "codon-bias" exhibited by a specific host cell in usage of nucleotide codons to specify a given amino acid. Therefore, when synthesizing a nucleic acid fragment for improved expression in a host cell, it is desirable to design the nucleic acid fragment such that its frequency of codon usage approaches the frequency of preferred codon usage of the host cell.

**IN THE CLAIMS:****Please cancel claims 1-10 without prejudice or disclaimer.****Please add the following new claims:**

11. "added" An isolated polynucleotide that encodes a pyridoxamine-phosphate oxidase, wherein the polypeptide has a sequence identity of at least 80%, based on the Clustal method of alignment, when compared to a polypeptide selected from the group consisting of SEQ ID NOs:10, 12, 14, and 16.

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12. "added" The polynucleotide of Claim 11 wherein the sequence identity is at least 90%.

13. "added" The polynucleotide of Claim 11 wherein the sequence identity is at least 95%.

14. "added" The polynucleotide of Claim 11 wherein the polynucleotide encodes a polypeptide selected from the group consisting of SEQ ID NOs:10, 12, 14, and 16.

15. "added" The polynucleotide of Claim 11, wherein the polynucleotide comprises a nucleotide sequence selected from the group consisting of SEQ ID NOs:9, 11, 13, and 15.

16. "added" An isolated complement of the polynucleotide of Claim 11, wherein (a) the complement and the polynucleotide consist of the same number of nucleotides, and (b) the nucleotide sequences of the complement and the polynucleotide have 100% complementarity.

17. "added" An isolated polynucleotide that (1) comprises at least 400 contiguous nucleotides and (2) remains hybridized with the isolated polynucleotide of Claim 11 under a wash condition of 0.1X SSC, 0.1% SDS, and 65°C.

18. "added" A chimeric gene comprising the polynucleotide of Claim 11 operably linked to at least one regulatory sequence.

19. "added" A cell comprising the polynucleotide of Claim 11.

20. "added" The cell of Claim 19, wherein the cell is selected from the group consisting of a yeast cell, a bacterial cell and a plant cell.

21. "added" A virus comprising the polynucleotide of Claim 11.

22. "added" A transgenic plant comprising the polynucleotide of Claim 11.

23. "added" A method for transforming a cell comprising introducing into a cell the polynucleotide of Claim 11.

24. "added" A method for producing a transgenic plant comprising (a) transforming a plant cell with the polynucleotide of Claim 11, and (b) regenerating a plant from the transformed plant cell.

25. "added" A vector comprising the polynucleotide of Claim 11.

26. "added" A seed comprising the chimeric gene of Claim 18.

27. "added" A method for isolating a polypeptide encoded by the polynucleotide of Claim 11 comprising isolating the polypeptide from a cell transformed with said polynucleotide.

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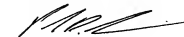
**REMARKS**

Claims 1-10 have been canceled, and claims 11-27 have been added. Thus, claims 11-27 are pending.

Added claims 11-27 are supported by the originally filed application. Claim 1, for example, is supported in the specification at page 2, lines 3-6, and page 6, lines 7-18. No new matter is added.

Please charge any requisite fee to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,



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Dated: 2/20/02

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**VERSION WITH MARKING TO SHOW CHANGES MADE**

In showing the changes, deleted material is shown in brackets, and inserted material is shown underlined.

**IN THE SPECIFICATION:**

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**IN THE CLAIMS:**

**Claims 1-10 canceled.**

**Claims 11-27 added.**

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